TECHNICAL REVIEW AND EVALUATION
OF APPLICATION FOR
AIR QUALITY PERMIT NO. 66622

Sundt Construction, Inc.

I. INTRODUCTION

This Class II synthetic minor permit is issued to Sundt Construction, Inc., the Permittee, for the continued operation of a concrete batch plant. This is a renewal of Permit No. 50329 for a portable facility which will be operated statewide.

A. Company Information

1. Facility Name: Sundt Construction, Inc.

2. Facility Location: 1903 East University Drive
Phoenix, Maricopa County, Arizona

3. Mailing Address: Sundt Construction, Inc.
2620 South 55th Street
Tempe, AZ 85282

II. PROCESS DESCRIPTION

A. Concrete is composed of water, cement, sand (fine aggregate), and coarse aggregate. Coarse aggregate may consist of gravel or crushed stone. Concrete batching plants store, convey, measure, and discharge these constituents into trucks for transport to a job site.

The aggregate material is delivered by front-end loader or conveyor to the concrete batch plant. The cement is transferred to elevated storage silos pneumatically. The sand and coarse aggregate are transferred to elevated bins by front-end loader and belt conveyor. From these elevated bins, the constituents are fed by gravity or conveyor to weigh hoppers, which combine the proper amount of each material. Sand, aggregate, cement, and water are all gravity fed from the weigh hopper into mixer trucks. The concrete is mixed on the way to the site where the concrete is to be poured.

B. Control Devices

A baghouse is installed on the concrete batch plant to control the emissions of particulate matter from the facility.

III. EMISSIONS

Table 1: Potential to Emit

Pollutant	Emissions (tons per year)	Maricopa County BACT Limits (tons per year)
PM_{10}	6.9	15
$PM_{2.5}$	1.6	10
NO_x	19.4	40
CO	1.1	100
SO_2	0.1	40
VOC	0.2	40

Note: Process emissions are based on 11 hours of operation per day.
Concrete batch plant generator emissions are based on 13 hours of operation per day.
Chiller generator emissions are based on 24 hours of operation per day.

IV. APPLICABLE REGULATIONS

The applicable requirements for each permitted piece of equipment along with an explanation of why the requirement is applicable is summarized in the tables below. Table 2 includes statewide applicable regulations; Table 3 includes Maricopa County applicable regulations; Table 4 includes Pima County applicable regulations; and Table 5 includes Pinal County applicable regulations.

Table 2: Statewide Applicable Regulations

Unit	Control Device	Rule	Discussion
Concrete Batch Plant	Baghouse	A.A.C R18-2-702.B A.A.C R18-2-723	These standards apply to concrete batch plants.
Non-Emergency Compression Ignition Generator	Particulate Filter	40 Code of Federal Regulations Part 60, Subpart IIII	This standard is applicable to compression ignition internal combustion engines that commence construction after July 11, 2005, and where the ICE is manufactured after April 1, 2006.
Fugitive Dust Sources	Water and other reasonable precautions.	A.A.C. R18-2 Article 6 A.A.C. R18-2-702	These standards are applicable to all fugitive dust sources at the facility.
Mobile Sources	None	A.A.C. R18-2-801	These are applicable to off-road mobile sources, which either move while emitting air pollutants or are frequently moved during the course of their utilization.

Unit	Control Device	Rule	Discussion
Abrasive Blasting	Wet blasting; Dust collecting equipment; Other approved methods	A.A.C. R-18-2-702 A.A.C. R-18-2-726	These standards are applicable to any abrasive blasting operation.
Spray Painting	Enclosures	A.A.C. R18-2-702 A.A.C. R-18-2-727	This standard is applicable to any spray painting operation.
Demolition/Renovation Operations	N/A	A.A.C. R18-2-1101.A.8	This standard is applicable to any asbestos related demolition or renovation operations.

Table 3: Maricopa County Applicable Regulations

Unit	Control Device	Rule	Discussion
Facility Wide Requirements	None	Maricopa County Rule 300 §301 Maricopa County Rule 320 §300 Maricopa County Rule 300 §302 Maricopa County Rule 300 §303	General Opacity Limitation General Odor And Gaseous Air Contaminant Limitations
Concrete Batch Plant and Fugitive Dust	Baghouse, Water Trucks, Dust Suppressants	Maricopa County Rule 316	These regulations apply to Nonmetallic Mineral Processing Plants located in Maricopa County.
Non-Emergency Compression Ignition Generator	Particulate Filter	Maricopa County Rule 324	These regulations apply to stationary internal combustion engines located in Maricopa County.
Abrasive Blasting	N/A	Maricopa County Rule 312	These regulations apply to abrasive blasting in Maricopa County.
Spray Painting	N/A	Maricopa County Rule 315	These regulations apply to spray painting in Maricopa County.

Table 4: Pima County Applicable Regulations

Unit	Control Device	Rule	Discussion
Concrete Batch Plant	Baghouse	P.C.C. §§17.16.380	This regulation applies to concrete batch plants located in Pima County.
Fugitive Dust	Water Trucks, Dust Suppressants	P.C.C. §§17.16.60 P.C.C. §§17.16.70 P.C.C. §§17.16.80 P.C.C. §§17.16.90 P.C.C. §§17.16.100 P.C.C. §§17.16.110 P.C.C. §§17.16.120	These regulations apply to existing and new nonpoint sources located in Pima County.
General Requirements	N/A	P.C.C. §§17.16.10 P.C.C. §§17.16.40 P.C.C. §§17.16.50 Pima Sip Rule 343	These regulations apply to all sources in Pima County.

Table 5: Pinal County Applicable Regulations

Unit	Control Device	Rule	Discussion
Facility Wide Requirements	Baghouse, Water Trucks, Dust Suppressants	Pinal Code §4-2-040 Pinal Code §4-2-050	The regulations listed apply to miscellaneous and unclassified sources in Pinal County

V. PREVIOUS PERMIT CONDITIONS

Permit No. 50329 was issued on January 1, 2012, for the continued operation of this facility. Table 6 below illustrates if a section in Permit No. 50329 was revised or deleted.

Table 6: Permit No. 50329

Section No.	Determination		Comments
	Revised	Delete	
Att. A	X		General Provisions – Revised to represent most recent template language.
Att. B Section I	X		Operating Limitations – In order to maintain compliance with the production limit of 13,200 tons per day, the concrete batch plant will operate eleven (11) hours per day. The concrete batch plant generator operating hours limit (was relocated to Section III of the permit – Compression Ignition Engines Subject to NSPS) while operating in Maricopa County was increased from 12.5 hours per day to 13 hours per day for the following three reasons: (1) A change in equipment resulted in a reduction of NO_X emission. Two (2) 365kW Tier 3 generators which were used to power the concrete batch plant were replaced with one (1) 800kW Tier 4 generator; (2) Maricopa County BACT limits were increased for VOC, NO_X, and SO_2. In Permit No. 50329, the concrete batch plant generators were limited to 12.5 operating hours per day to ensure that NO_X emissions were less than 20 tons per year (80% of the 25 tons per year BACT limit). However, the most recent version of Maricopa County Rules became effective on September 7, 2016. Rule 241, Section 304 increased the BACT limits from 25 tons per year to 40 tons per year of VOC, NO_X, and SO_2. For this facility, NO_X is the only pollutant that is relatively close to the BACT limit. NO_X PTE was calculated using vendor supplied emission factors, 13 hours of operation per day for the concrete batch plant generator, and 24 hours of operation per day for the chiller generator. NO_X PTE was calculated at 19 tons per year which is less than 80% of the current Maricopa County BACT limit of 40 tons per year; and (3) Thirteen (13) hours of concrete batch plant generator operation passed modeling. Sundt Construction, Inc.'s modeling report dated June 10, 2011 illustrates that the concrete batch plant generator can operate 13 hours per day and not exceed the NAAQS standards for CO, SO_2, and NO_X statewide.
Att. B Section III	X		Compression Ignition Engine Subject to NSPS – Includes the most recent conditions of 40 CFR 60 Subpart IIII

VI. MONITORING REQUIREMENTS

A. Concrete Batch Plant

1. The Permittee is required to maintain records of concrete produced per day.

2. When operating statewide, the Permittee is required to show compliance with the opacity standards in the concrete batch plant section of the permit by conducting a monthly survey of visible emissions. The Permittee is required to conduct a six minute observation if the results of the initial survey appear on an instantaneous basis to exceed the applicable standard.

   When operating in Maricopa County, opacity observations are required on a weekly basis.

   All instantaneous surveys and six minute observations can be conducted by either Method 9, Alt 82, or any combination thereof.

3. The Permittee is required to keep records of the name of the observer, the time, date, and location of the observation and the results of all surveys and observations.

B. Generator

1. The Permittee is required to keep records of fuel supplier specifications.

2. The Permittee is required to maintain records of engine operation in hours per day for the generator that powers the concrete batch plant.

3. The Permittee is required to maintain a copy of engine certifications or other documentation demonstrating that each engine complies with the applicable standards in the permit.

4. The Permittee is required to install a backpressure monitor to notify the operator when the high backpressure limit of the engine is approached.

C. Fugitive Dust

1. The Permittee is required to keep records of the dates and types of dust control measures employed.

2. The Permittee is required to show compliance with the opacity standards in the fugitive dust section of the permit by conducting a monthly survey of visible emissions. The Permittee is required to conduct a six minute observation if the results of the initial survey appear on an instantaneous basis to exceed the applicable standard.

3. The Permittee is required to keep records of the name of the observer, the time, date, and location of the observation and the results of all surveys and observations.

4. The Permittee is required to keep records of any corrective action taken to lower the opacity of any emission point and any excess emission reports.

5. When operating in Maricopa County, the Permittee is required to create, submit and follow a dust control plan which contains all the necessary elements of Maricopa County Rule 316.

D. Periodic Activities

1. The Permittee is required to record the date, duration and pollution control measures of any abrasive blasting project.

2. The Permittee is required to record the date, duration, quantity of paint used, any applicable safety data sheets, and pollution control measures of any spray painting project.

3. The Permittee is required to maintain records of all asbestos related demolition or renovation projects. The required records include the "NESHAP Notification for Renovation and Demolition Activities" form and all supporting documents.

E. Mobile Sources

The Permittee is required to keep records of all emission related maintenance performed on the mobile sources.

VII. COMPLIANCE HISTORY

Since January 1, 2012, no physical inspections have occurred because the facility has not been operating and in storage.

VIII. LIST OF ABBREVIATIONS

A.A.C. ..... Arizona Administrative Code
CO ..... Carbon Monoxide
HAPs ..... Hazardous Air Pollutants
hp ..... Horsepower
NO_x ..... Nitrogen Oxide
PM_{10} ..... Particulate Matter Nominally less than 10 Micrometers
$PM_{2.5}$ ..... Particulate Matter Nominally less than 2.5 Micrometers
SO_2 ..... Sulfur Dioxide
VOC ..... Volatile Organic Compound